

Monitoring Data Record

Project Title: R-210A (Site 10) COE Action ID: 1993-0-0570

Stream Name: Unnamed tributary to the Little River DWQ Number: 010404

City, County and other Location Information: US 1 (Vass Bypass) in Moore County  
(Sta. 51+70 to 52+20)

Date Construction Completed: July 2003 Monitoring Year: ( 5 ) of 5

Ecoregion: \_\_\_\_\_ 8 digit HUC unit: 03030004

USGS Quad Name and Coordinates: \_\_\_\_\_

**Rosgen Classification:** \_\_\_\_\_

Length of Project: 174' Urban or Rural: Rural Watershed Size: \_\_\_\_\_

Monitoring DATA collected by: M. Green, J. Young Date: 6/3/09

Applicant Information:

Name: NCDOT Roadside Environmental Unit

Address: 1425 Rock Quarry Rd. Raleigh, NC 27610

Telephone Number: (919) 861-3772 Email address: [mlgreen@ncdot.gov](mailto:mlgreen@ncdot.gov)

Consultant Information:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_ Email address: \_\_\_\_\_

**Project Status:** Complete

**Monitoring Level required by COE and DWQ (404 permit/ 401 Cert.):** Level 1 2 3

Monitoring Level 1 requires completion of *Section 1, Section 2 and Section 3*

**Permit Conditions:** The permittee shall monitor the stream relocation site for a period of five years starting the year following construction. Monitoring data at the site should include the following: reference photos, plant survival, and channel stability. Data shall be collected each year for 5 years at the same time of year. No less than two bankfull events must be documented through the required 5-year monitoring period. If less than two bankfull events occur during the first 5 years, monitoring will continue until the second bankfull event is documented. The bankfull events must occur during separate monitoring years.

Section 1. PHOTO REFERENCE SITES

*(Monitoring at all levels must complete this section)*

**Total number of reference photo locations at this site:** 3 reference points, 2 photos at each

**Dates reference photos have been taken at this site:** 6/7/05, 6/22/06, 6/19/07, 6/4/08, 6/3/09

**Individual from whom additional photos can be obtained (name, address, phone):** \_\_\_\_\_

Other Information relative to site photo reference: A site map has been included with this report that shows the photo point locations.

If required to complete Level 3 monitoring only stop here; otherwise, complete section 2.

## Section 2. PLANT SURVIVAL

Attach plan sheet indicating reference photos.

Identify specific problem areas (missing, stressed, damaged or dead plantings):

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Estimated causes, and proposed/required remedial action:

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ADDITIONAL COMMENTS: This site was replanted in February 2006 due to low survival rates from the initial planting. The streambanks were live staked with buttonbush and silky dogwood live stakes. The floodplain was replanted with river birch, swamp chestnut oak, and willow oak. Other vegetation noted onsite consisted of black willow, tulip poplar, sweetgum, overcup oak, fescue, woolgrass, fennel, red maple, alder, goldenrod, *Juncus* sp., pine, lespedeza, foxtail, and various grasses. Stem counts were conducted onsite. It was determined that 620 trees per acre are surviving as seen in the table below. Although no willow oaks were recorded in the vegetation plot there were some willow oaks noted surviving onsite. NCDOT proposes to discontinue vegetation monitoring at the UT to Little River stream relocation site.

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If required to complete Level 1 and Level 2 monitoring only stop here; otherwise, complete section 3.

Plot #	River Birch	Swamp Chestnut Oak	Willow Oak	Total (5 year)	Total (at planting)	Density (Trees/Acre)
1	31	10		41	45	620
Average Density (Trees/Acre)						620

### Section 3. CHANNEL STABILITY

**Visual Inspection:** The entire stream project as well as each in-stream structure and bank stabilization/revetment structure must be evaluated and problems addressed.

Report on the visual inspection of channel stability. Physical measurements of channel stability/morphology will not be required. Include a discussion of any deviations from as-built and an evaluation of the significance of these deviations and whether they are indicative of a stabilizing or destabilizing situation.

The stream is stabilized for the 5th year of monitoring. At the time of the monitoring evaluation water was still piping under the log vane structure as noted in Photo 1. NCDOT proposes to discontinue stream stability monitoring.

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6/3/09	Sta. 51+80 Photo 1	Station Number	Station Number	Station Number	Station Number
Structure Type	Log Vane				
Is water piping through or around structure?	Water is piping under the log vane				
Head cut or down cut present?					
Bank or scour erosion present?					
Other problems noted?					

**NOTE:** Attach separate narrative sheets to each monitoring report describing/discussing the overall monitoring results. Include the identification of specific problem areas/channel failures, estimated cause and proposed/required remedial action. This should include a brief discussion of any parameter that has changed significantly from as-built.



# UT to Little River



Photo 1 taken from PP# 1 looking upstream



Photo 2 taken from PP#1 looking downstream



Photo 3 taken from PP#2 looking upstream



Photo 4 taken from PP#2 looking downstream



Photo 5 taken from PP#3 looking upstream



Photo 6 taken from PP#3 looking downstream





Photo #7 Overview photo taken upstream



Photo #8 Overview photo taken downstream looking @ vegetation plot

UT Little River  
R-2 10A  
Moore County

